

English translation of the Claims

amended by the amendment under PCT Article 34 (2) (b)

1. (amended) A catalyst composition for the production of a poly(ethylene oxide) polymer which is a catalyst composition capable of producing a poly(ethylene oxide) polymer having a molecular weight range from 20,000 to 200,000 by direct polymerization economically in a high yield, wherein the catalyst composition comprises component A: an organoaluminum compound and component B: at least one kind of an alkali metal alkoxide compound or an alkali metal hydroxide compound.

2. The catalyst composition as defined in claim 1, wherein the organoaluminum compound is a compound which has no Al-O bond and has an Al-C bond in the molecule.

3. The catalyst composition as defined in claim 1 or 2, wherein the organoaluminum compound is one or more kinds selected from the group consisting of a trialkylaluminum compound and a tricycloalkylaluminum compound.

4. (amended) The catalyst composition as defined in claim 3, wherein the trialkylaluminum compound is tri-isobutyl aluminum.

5. (amended) The catalyst composition as defined in any one of claims 1 to 4, wherein the alkali metal alkoxide compound is potassium t-butoxide.

6. (amended) The catalyst composition as defined in any one of claims 1 to 4, wherein the alkali metal hydroxyl compound is potassium hydroxide.

7. The catalyst composition as defined in any one of claims 1 to 6, wherein the component A is contained in an amount of 3 mol or more per mol of the component B.

8. (amended) A method for producing poly(ethylene oxide) by using a catalyst composition capable of regulating to a desired molecular weight within the range of from 20,000 to 200,000, in which the catalyst composition comprising component A: an organoaluminum compound and component B: at least one kind of an alkali metal alkoxide compound or an alkali metal hydroxide compound is used and in which a poly(ethylene oxide) having a relatively narrow molecular weight distribution and a relatively low molecular weight, which poly(ethylene oxide) is characterized by a low polydispersity, is obtained by regulating the ratio of the component A and the component B in the catalyst composition.

9. The method for producing poly(ethylene oxide) as defined in claim 8, wherein the molar ratio of the component A in the catalyst composition is regulated to 3 mol or more per 1 mol of the component B.

10. The method for producing poly(ethylene oxide) as defined

in claim 8 or 9, wherein the amount of the catalyst composition used is 0.1 to 5.0 mol% of an Al atom based on ethylene oxide.

11. (amended) The method for producing poly(ethylene oxide) as defined in claim 8 or 9, wherein the amount of the catalyst composition used is 0.2 to 3.0 mol% of an Al atom based on ethylene oxide.

12. (amended) The method for producing poly(ethylene oxide) as defined in claim 8 or 9, wherein the amount of the catalyst composition used is 0.4 to 1.5 mol% of an Al atom based on ethylene oxide.

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